What is claimed:

1. A method to detect a NF-κB related medical condition in an organism comprising the steps of:

obtaining a sample from said organism; and

analyzing said sample for an alteration in a nucleic acid of SEQ ID NO:1, wherein said alteration results in inactivation of NF-κB.

2. The method of Claim 1, wherein said alteration is a mutation, wherein said mutation is selected from the group consisting of a deletion, an insertion, a point mutation, a rearrangement in said sequence, and a combination thereof.

3. The method of Claim 2, wherein said point mutation is selected from the group consisting of a nonsense mutation, a frameshift mutation, a missense mutation, a splicing-related mutation, and a combination thereof.

4. The method of Claim 1, wherein said alteration is located in a regulatory nucleic acid, a promoter nucleic acid an exon, an intron, an initiator codon, a stop codon, an exon/intron junction, a 5′ untranslated region, a 3′ untranslated region and a combination thereof.

5. The method of Claim 1, wherein said analyzing step comprises a method selected from the group consisting of hybridization, SSCP, heteroduplex analysis, sequencing, polymerase chain reaction, electrophoresis, and a combination thereof.

6. The method of Claim 1, wherein said organism is a human.

7. The method of Claim 1, wherein said NF-κB related medical condition is a NF-κB Essential Modulator related medical condition.

8. The method of Claim 1 or 7, wherein said medical condition is Incontinentia Pigmenti.

9. A method to detect a NF-κB related medical condition in an organism comprising the steps of:

obtaining a sample from said organism; and

analyzing said sample for an alteration in an amino acid of SEQ ID NO:2, wherein said alteration results in inactivation of NF-κB.

10. The method of Claim 9, wherein said alteration in said sequence is selected from the group consisting of an addition, deletion, substitution, and a combination thereof.

11. The method of Claim 9, wherein said analyzing step is selected from the group consisting of sequencing, electrophoresis, molecular weight determination, antibody binding, and a combination thereof.

12. The method of Claim 9, wherein said NF-κB related medical condition is a NF-κB Essential Modulator related medical condition.

13. The method of Claim 9 or 12, wherein said medical condition is Incontinentia Pigmenti.

14. A method to treat a NF-κB related medical condition in an organism comprising the step of administering to said organism a therapeutically effective amount of a nucleic acid of SEQ ID NO:1.

15. The method of Claim 14, wherein said administration step includes administration of said nucleic acid sequence in a vector.

16. A method to treat an organism with an NF-κB related medical condition comprising the step of administering to said organism a therapeutically effective amount of an amino acid of SEQ ID NO:2.

17. The method of Claim 16, wherein said administration of said amino acid of SEQ ID NO:2 includes attaching a protein transduction domain to said sequence prior to administration to said organism.

18. The method of Claim 14 or 16, wherein said medical condition is selected from the group consisting of an apoptosis-related disease, an immune-system related disease, a blood vessel-related disease, a skin defect, a dental defect, osteopetrosis, an opthamalogical defect, a neurological defect and Incontinentia Pigmenti.

19. The method of Claim 14 or 16, wherein said medical condition is Incontinentia Pigmenti.

20. A method to prevent a NF-κB related medical condition in an organism comprising the step of administering to said organism a therapeutically effective amount of a nucleic acid of SEQ ID NO:1.

21. A method to prevent a NF-κB related medical condition in an organism comprising the step of administering to said organism a NF-κB Essential Modulator amino acid of SEQ ID NO:2.

22. The method of Claim 20 or 21, wherein said medical condition is selected from the group consisting of an apoptosis-related disease, an immune-system related disease, a blood vessel-related disease, a skin defect, a dental defect, osteopetrosis, an ophthalmologic defect, a neurological defect and Incontinentia Pigmenti.

23. The method of Claim 20 or 21, wherein said medical condition is Incontinentia Pigmenti.

24. The method of Claim 20 or 21, wherein said administration occurs *in utero*.

25. The method of Claim 20 or 21, wherein said administration is to an infant.

26. A method to screen in a test organism for a compound for the treatment of a NF-κB related medical condition, wherein said test organism has an alteration in a nucleic acid of SEQ ID NO:1, wherein said alteration results in inactivation of NF-κB, comprising the step of administering said compound to said organism and assaying for an improvement in said NF-κB related medical condition.

27. The method of Claim 26, wherein said medical condition is Incontinentia Pigmenti.

28. A method to screen in a test organism for a compound for the treatment of a NF-κB related medical condition, wherein said test organism has an alteration in an amino acid of SEQ ID NO:2, wherein said alteration results in inactivation of NF-κB, comprising the step of administering said compound to said organism and assaying for an improvement in said NF-κB related medical condition.

29. The method of Claim 28, wherein said medical condition is Incontinentia Pigmenti.

30. A composition for the treatment of a NF-κB related medical condition in an organism comprising:

a therapeutically effective amount of a nucleic acid of SEQ ID NO:1; and

a pharmaceutically acceptable carrier.

31. A composition for the treatment of a NF-κB related medical condition in an organism comprising:

a therapeutically effective amount of an amino acid of SEQ ID NO:2; and

a pharmaceutically acceptable carrier.

32. A method to detect an alteration in a nucleic acid of SEQ ID NO:1 in an organism, comprising the steps of:

obtaining a sample from said organism; and

analyzing said sample for said alteration.

33. The method of Claim 32, wherein said alteration is a mutation, wherein said mutation is selected from the group consisting of a deletion, an insertion, point mutation, a rearrangement, and a combination thereof.

34. The method of Claim 33, wherein said point mutation is selected from the group consisting of a nonsense mutation, a frameshift mutation, a missense mutation, a splicing-related mutation, and a combination thereof.

35. The method of Claim 32, wherein said alteration is located in a regulatory nucleic acid, a promoter nucleic acid, an exon, an intron, an initiator codon, a stop codon, an exon/intron junction, a 5′ untranslated region, a 3′ untranslated region and a combination thereof.

36. The method of Claim 32, wherein said analyzing step comprises a method selected from the group consisting of hybridization, SSCP, heteroduplex analysis, sequencing, polymerase chain reaction, electrophoresis, and a combination thereof.

37. The method of Claim 32, wherein said organism is a human.

38. The method of Claim 32, wherein said organism is a human selected from the group consisting of an affected individual, a carrier individual, or a noncarrier individual.

39. The method of claim 32, wherein said analyzing step further comprises a technique selected from the group consisting of PCR analysis and Southern blot analysis.

40. The method of Claim 39, wherein said PCR analysis utilizes at least one primer selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO: 17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO: 43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60; and SEQ ID NO:61.

41. The method of Claim 39, wherein said PCR analysis utilizes two primers selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO: 17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO: 43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:74, SEQ ID NO:75, and fragments and derivatives thereof.

42. The method of Claim 39, wherein said PCR analysis utilizes a primer SEQ ID NO:50 and a primer SEQ ID NO:34.

43. The method of Claim 39, wherein a probe for said Southern analysis is a nucleic acid of SEQ ID NO:3, or fragments and derivatives thereof.

44. A method to detect an alteration in an amino acid of SEQ ID NO:2 in an organism, comprising the steps of:

obtaining a sample from said organism; and

analyzing said sample for said alteration.

45. A kit for the detection of an alteration in a nucleic acid of SEQ ID NO:1 comprising at least two primers for polymerase chain reaction.

46. A kit for the detection of an alteration in a nucleic acid of SEQ ID NO:1 comprising at least two primers selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO: 43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60; SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77 and fragments and derivatives thereof.

47. A nucleic acid of SEQ ID NO:1, and fragments and derivatives thereof.

48. A nucleic acid selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO: 17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO: 43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60; SEQ ID NO:61; SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:74, SEQ ID NO:75, and fragments and derivatives thereof.

49. An amino acid selected from the group consisting of SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:72, SEQ ID NO:73, SEQ ID NO:76 and SEQ ID NO:77, and fragments and derivatives thereof.